PORSCHE PANORAMA

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PCA TEAM 3rd in GAMR - Don Kinney 1st in Class

(HARVEY DAVID AND DON KINNEY READY FOR HILL CLIMB AT LAKE PLACID)

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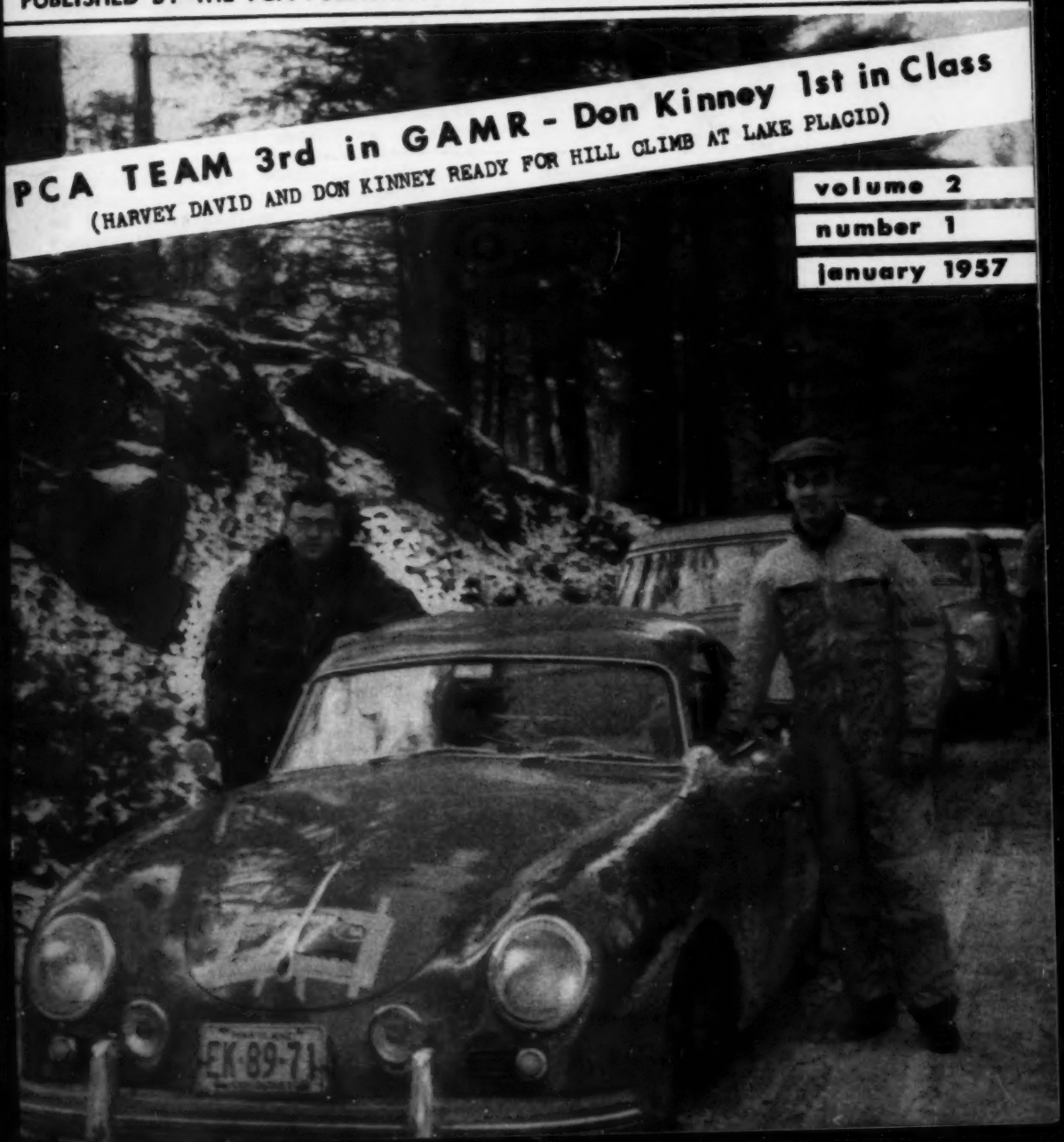


THANKS!

We begin the new year with a new publication schedule for Panorama as well as a new operating staff. We'd like to start out by expressing our sincerest thanks and appreciation for those who are now retired from the Panorama staff to once more resume a more or less normal life. You may rest assured that the present staff has been sorely tempted, particularly in view of generous offers of help, to accept the assistance of the prior staff of Panorama. However, these individuals have devoted so much of their time, this past year or better, in order to successfully produce Panorama, that we simply could not bring ourselves to impose upon them.

In order that credit be properly given where credit is due, we would first of all like to thank past editor Gamble Mann for a job well done. In fact, we should thank Gamble that the job was done at all since it was largely through his efforts that Panorama was published, Gamble being personally responsible for a tremendous amount of the material which appeared in Panorama.

Ably assisting Gamble this past year has been Ray Pitts, whose duties as technical editor have carried him hither and yon - both personally and through reams of correspondence, in what seems to us to have been an insatiable thirst for technical information. That he has been successful is self-evident, and we certainly wish to thank you, Ray.

Chiefly to clearly establish the proportions of the task which Gamble and Ray have performed, and also because we--as the new staff--have an axe to grind ourselves, we would like to point out that the greatest single problem which confronted editor Mann was not the editing, but the generation of suitable material for Panorama. Needless to say, this arrangement at best is woefully unsatisfactory and should be corrected, since it throws too much of a burden upon too few shoulders. Perhaps we will find, as did Gamble and Ray, that our club is still in such a stage of infancy that outside help is a practical impossibility. However, steps have been taken, and will continue to be taken, for the purpose of obtaining a larger area of participation insofar as generated material for Panorama is concerned. The purpose of this is twofold. First - as stated above - any other arrangement places an overwhelming work load on a very few individuals. Secondly, we sincerely wish to make Panorama a truly national publication. Therefore, we are appealing to every member, from all PCA regions, to contribute any and all material so that it may be incorporated in future editions of Panorama. Such material need not be carefully prepared -- what is chiefly needed is information for information's sake. And when we say information, we refer to anything at all which may be of interest, either regionally or nationally.

There is another individual whose efforts, not only in connection with Panorama but in regard to the national organization as well as the Potomac region, have been immense in impact and scope. We refer, of course, to Bill Sholar. Since Bill continues in his capacity as production manager, perhaps a continuing thanks should be extended. At any rate, let us not forget Bill even though his knack for working hard and producing results without any apparent effort inclines us to take him for granted.

FOURTH ANNUAL GREAT AMERICAN MOUNTAIN RALLYE

This year's running of the GAMR saw a team of three cars entered by PCA: Ken Twigg/Frank Beckett (Potomac Region); Bing Ford (Central New York Region); and Don Kinney/Harvey David (Potomac Region).

All cars in the team finished (a feat in itself) and although the official results for two of the cars are not known precisely at present, all team members finished better than 30th over-all.

Ken Twigg and Frank Beckett have told us that they finished about 27th over-all and that Bing Ford finished about 24th or 25th. The team itself took third place and Don Kinney with Harvey David as navigator took 10th over-all (sterling silver cup) and 1st in class (under 1500 cc - cup is over 1500 cc).

The team prize was displayed at the November meeting of the Potomac Region by Ken Twigg - who advised us that although he did not know exactly what to do with the prize it must be remembered that it represented the efforts of six grown men. Ken is the Tennessee Ernie of the Potomac Region

as will be testified to by Frank Beckett, who tells us that if he had a movie camera and sound recording equipment in the car during the GAMR, he could forthwith and presently retire by merely selling the film.

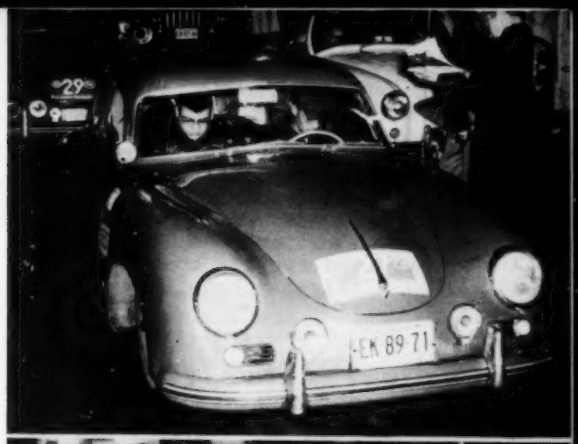
As we all know, the GAMR represents the ultimate in American rallies, and among those who enter are the cream of the East Coast Rally crop. Each year usually sees a number of first-class European drivers, usually representing factory teams. For these reasons, we are justly proud of all those members of PCA who participated in GAMR this year - and we hope to be able to send a larger representation next year.

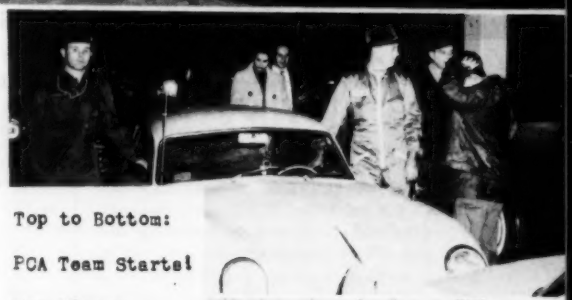
The rally route took our gallant team generally northeast out of New York City into Connecticut on the fine parkway system -- at relatively high average speeds with frequent changes of speed being thrown in just to keep everybody honest. The first contestant was off at midnight, and as Don Kinney put it, you got your first clue as to what the rally would be like when you pulled up to the starting line and found that J. M. Fangio was the official starter. Most contestants encountered high winds and a driving rain. Don Kinney reports that in this leg of the rally, he actually saw a tractor-trailer rig drifting through a turn which should give you some idea of the road conditions. The first section of the rally was more or less conventional and straight-forward and it was only in Part 2 of Section 1 where most of the contestants began to run into difficulty.

One of the instructions in this part of the rally directed the contestants to turn right at a large hanging sign "Bear Brook State Park" also sign "Allenstown 1 mile". The only difficulty was that the large hanging sign had fallen down, or in some manner or other disappeared completely, with the result that most contestants found themselves quickly and horribly lost.

One rather interesting part about this and other portions of the rally were the numerous instructions as follows: "Road turns back into macadam. Stay on macadam". This sounds real simple and everything seems OK, except that the roads were covered with several inches of snow, and it was impossible many times to

...drift to Page 4





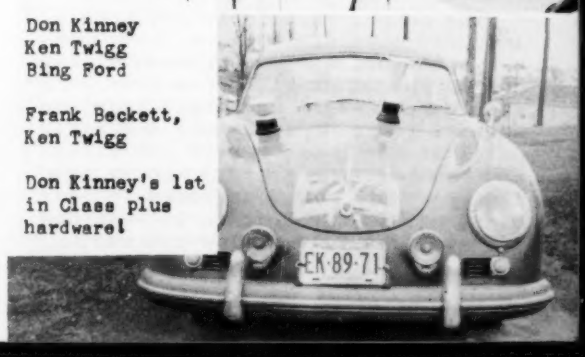
Top to Bottom:

PCA Team Starts!

Don Kinney
Ken Twigg
Bing Ford

Frank Beckett,
Ken Twigg

Don Kinney's 1st in Class plus hardware!



determine whether you were on dirt, macadam or otherwise.

Upon looking over the instructions for the rally, your first impression (correct) is that there are an awful lot of them. Also, with few exceptions, the instructions are rather lengthy, and require considerable mental gymnastics to keep everything in its proper order so as to accurately follow instructions. Taking this into consideration, as well as the fact that the first leg of the rally took approximately 18 hours of straight driving, it can be appreciated that mental stangation is apt to take over very early in the leg.

The way in which the checkpoints are handled is rather interesting. At each checkpoint, a team equipped with very accurate watches and having s short wave radio tuned to the time signal, marks in the hour, minute and second of arrival. An original and a carbon copy are made, the original being given to the navigator of the car and the carbon copy kept for official computation. To a man, the PCA team made this observation: don't linger at checkpoints. The average speeds were high enough and the condition of the roads rugged enough so that at no time did our intrepid team members have a chance to linger at any point whatsoever.

The first section of the rally ended up st St. Johnsbury, Vermont, and gave the contestants a chance to rest overnight to start out early the next morning on the second section. Incidentally, when the cars completed a section of the rally, they had exactly five minutes in which to arrive from the last checkpoint to the impounding area, no chance for tune-ups or tinkering here. At the impounding area, all cars were checked to see that all seals were unbroken, the cars being given a fairly thorough inspection, and contestants were given exactly fifteen minutes, no more, to add oil or make any adjustments or what-have-you.

The second day of the rally, unanimously considered to be the roughest part, took the contestants almost due north out of St. Johnsbury, and then generally northwest from the town of Lyndon, to a most northerly point at Montgomery Center almost due northwest from St. Johnsbury, and then south from Montgomery Center over, across, around, in between and all over the Cold Hollow Mountains,

Don Kinney in Trials at Armory.

as well as the Green Mountains of Vermont.

During this extremely interesting portion of the rally, the contestants encountered Smugglers Notch. No average speed to maintain here, just thirty minutes to get over the Notch and on the other side. Heading south from Smugglers Notch, the cars all played around in the Green Mountains and then struck out almost due west from the town of Roxbury, through Lincoln Gap, and then south on the west side of the mountains for a few miles, where they turned east and crossed the mountains again, at Middlebury Gap.

Most of this time, the contestants were wandering around in the Green Mountain National Forest, which we have no doubt is a very beautiful spot in the summertime, but which the boys loudly tell us is kind of rough in November. After wantering around some more in Vermont, everybody found himself wandering along the southwestern shore of Lake Champlain in New York State, heading in the general direction of Lake Placid, where they ended up the second day.

The next morning, on starting out from Lake Placid, our hearty crew found the temperature somewhere in the region of two or three hundred degrees below zero, and although many of the cars had great difficulty in starting, all the Porsches fired up and were ready to go with no difficulty. A note here, Don Kinney tells us that he jacked up one side of his car and engaged his transmission with the engine running, so as to warm up the gearbox and rear end assembly.

After contending with a hillclimb just outside Lake Placid, the contestants headed west over to Rt. 9N and then south to Albany, down the Hudson River Valley, and back into New York City that evening.

Fangio, the Maestro, also "started".

After a refreshing sleep, the top ten cars proceeded to undergo an elimination trial to see if they could not better their places. The elimination trial was held indoors, in an armory. The elimination trial itself was a timed run from a dead standstill forwardly into a garaging area approximately 6/100 mi. from the starting line. The finalists had six seconds inwhich to make this run,and penalty points were assessed - not only on a time basis, but also upon the basis of the distance, in inches, in which the car was stopped from a barrier, the penalty for hitting the barrier being rather heavy. The next leg of the elimination trial was to back the car from a point just outside the first garage, around a pylon and in reverse into an adjacent garage, another barrier being used in the second garage. The final leg of the elimination trial was back into the first garage in a forward direction. Don Kinney got top honors among the first ten contestants, accumulating the highest number of penalty points. Due to a mix-up, he received the cup (temporarily!) for best score in the elimination trial.

All the boys had a fine time, and are hoping to be able to make the rally next year, although they all seemed a bit reluctant to embark upon such an adventure again immediately, being thankful that the next GAMR is a year away.

SQUEAKING STEERING WHEEL

It's probably not the steering wheel which squeaks. One member put up with the squeak for two months, and removed his steering wheel four times to apply increasingly heavy grease, to discover that the squeak was coming from the horn brush. The brush is a stick of carbon which can be removed by unscrewing the small black cap on the right hand side of the steering column just below the instrument panel. After removing the spring and brush, just wipe off the end of the carbon stick and the squeak will be gone.

--Ray Pitts

TRANSMISSION MAGNET

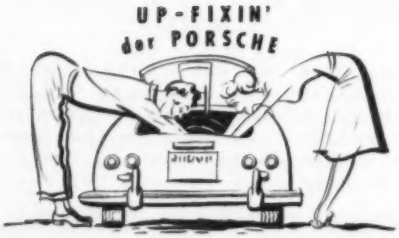
You are all familiar with the magnet in the bottom of the crankcase which can be removed and cleaned, but does everyone know there is a magnet in the transmission which serves the purpose of removing the tiny particles of steel that wear off the gears. Some Porsche owners have reported they suspected special oil had been placed in their transmission because they detected the presence of flakes in the oil when drained, and assumed they were graphite. We have noticed this condition too and discovered the "graphite" flakes are in fact steel, since they are attracted to a magnet and have the same appearance as the transmission magnet. If this magnet is not periodically cleaned, it will become loaded with particles and can hold no more; hence "graphite" flakes may be present in the drained oil.

The removable magnet is located on the left side of the transmission and is the more forward of the two plugs located there. When removing, be careful not to damage the clutch cable conduit. The plug should be cleaned whenever the oil is changed. The car manual cautions that the plug should not be screwed in too far, or else it may interfere with the shift fork. When replacing the plug, leave 3/8" of threads exposed. If the plug begins to leak oil, put some gasket compound on the threads.

--Ray Pitts

ACHTUNG! ACHTUNG!

Porsche has 6 "Factory Spyders" for sale (and we do mean SALE). These cars have been rebuilt and modified by the factory to the specifications of the famous Se-Bring-McAffee car. For sale direct from the factory as used models...no excise tax. The Price ... $4,000. FOB factory. Freight to U.S. about $150. Duty about.. $450. .. that's ALL!
Here's a once-in-a-lifetime-opportunity for 6 lucky guys.(or maybe you'd like 2 or 3). If interested, contact Bill Sholar...



SHIFTING TECHNIQUE AND ITS EFFECT ON THE CLUTCH AND RELATED PARTS--Part I

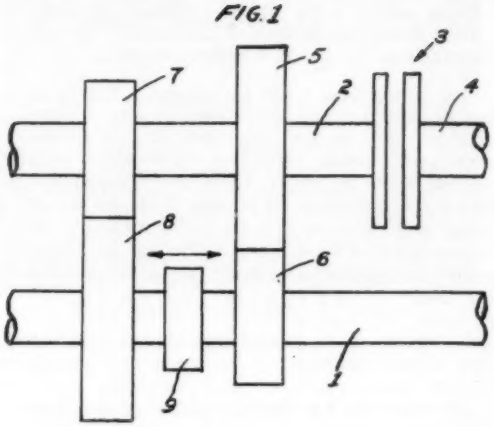
The Porsche is essentially a high performance machine, and in order to make it so, especially in view of its small engine, weight must be kept to a minimum. Consequently, it is understandable that one or more of its component parts may not readily take too much abuse even though designed to do its job properly under normal circumstances. So we think it may be safely said that in order to obtain reasonable service from a Porsche, a little more respect for its operating parts through more careful driving techniques must be had than is the case with our Detroit products where weight and size of parts are, at best, a secondary consideration.

We are all inclined to be a trifle sloppy in our driving habits, due to our long association with Detroit products; and particularly in regard to clutch failure and front transmission mounting failure, careless technique can only aggravate the situation.

In order to see what should be done, it is necessary to understand what takes place inside the transmission, and this is a lot less complicated than most are inclined to imagine.

Fig. 1 is a rather diagrammatic view of a transmission and is not intended to show the actual construction of the Porsche or any other transmission although the principles are identical with the Porsche transmission. Two shafts, 1 and 2, are mounted in parallel relation in the transmission case and each is free to rotate. Shaft 1 is connected, through the differential, to the rear wheels and consequently, the speed at which shaft 1 rotates is determined by the speed of rotation of the rear wheels, or in other words, the speed of the car. Shaft 2, on the other hand, is connected, through the clutch 3, to the engine crankshaft 4 and when the clutch is engaged, shafts

FIG. 1



2 and 4 will turn in unison, at the same speed. These two conditions, that shaft 1 rotates at a speed which is determined by the speed of the car while the other shaft 2 rotates at engine crankshaft speed when the clutch is engaged, must be firmly fixed in mind, since it will enable us to appreciate what is the ideal situation when shifting gears.

The shafts 1 and 2 are interconnected by a series of pairs of gears by means of which engine power is transmitted from crankshaft 4 through clutch 3 to shaft 2, and then to shaft 1 to drive the rear wheels. In the Porsche there are four such pairs of gears for forward motion, only two pairs being shown in Fig. 1. Gears 5 and 6 constitute one pair and gears 7 and 8 constitute the other pair. These pairs of gears are always in mesh, hence the Porsche transmission is a "constant mesh" transmission, but gears 6 and 8 are not always connected for rotation with shaft 1 and when the transmission is in "neutral" shaft 1 is free to rotate independently of both gears 6 and 8. Furthermore, only one gear, 6 or 8, at a time can be connected to shaft 1 and this is accomplished by gadget 9 which is the gear shifting mechanism and also forms part of the synchromesh mechanism. Shift mechanism 9 always rotates with and at the same speed as shaft 1 but can be slid back and forth on the shaft when we manipulate the gearshift lever. When shift mechanism 9 is moved toward gear 8, it will engage this gear and cause it to rotate with shaft 1 and when moved in the opposite direction will engage gear 6 and cause it to rotate with shaft 1. Therefore, when shift mechanism 9 is engaged with gear 6, for example, power is delivered to the rear wheels from

crankshaft 4, through clutch 3 to shaft 2, from gear 5 on shaft 2 through gear 6 and shift mechanism 9 to shaft 1 and consequently to the rear wheels.

By now, you may be asking how you can possibly "clash" gears when each pair of gears is constantly in mesh. Well, the reason for the "clash" which can be had is that there are teeth on shift mechanism 9 which engage with teeth on gears 6 and 8 and effect the above-mentioned engagement between these elements and any "clash" which you hear is actually the incorrect meshing of the teeth on shift mechanism 9 with the shift teeth on either gear 6 or gear 8.

To see this more clearly, we can take an extreme and highly unlikely case. For example, assume the car to be coasting downhill at say 30 m.p.h. with the engine not running and the transmission in neutral. In this case, the shaft 1 would be rotating at a speed of approximately 1800 RPM whereas shaft 2 would not be rotating at all, since the engine is dead, and consequently gears 5, 6, 7 and 8 would all be stationary, remembering that gears 5 and 7 are always fixed to shaft 2, while 6 and 8 are free to rotate with respect to shaft 1 if the transmission is in neutral. Now suppose we disengage the clutch 3 and shift our transmission into the higher gear, which would be gears 5 and 6 in the illustration. In doing this, we would be shifting the member 9 into engagement with gear 6, but since gear 6 is not rotating initially whereas shifting member 9 is rotating at the same speed as shaft 1 or at 1800 RPM, we can expect a horrible noise because the teeth on member 9 are going to try to chew up the corresponding teeth on gear 6 until such time as this chewing action causes gear 6 to accelerate to the same rotational speed, 1800 RPM, as member 9 is turning. But don't forget that in the process, gear 5, shaft 2 and gears 7 and 8 will also have to be accelerated and brought up to speed, so it is not merely a question of getting gear 6 to rotate at the same speed as shifting member 9, but a question of accelerating all of the gears as well as shaft 2 and bringing them from a dead standstill to a high rate of rotational speed in the short space of time it takes us to jam the gearshift lever from neutral into gear. Of course, if we hadn't disengaged the clutch, we'd have to get the whole engine turning over at the same speed as shaft 2. We'd also have to get a new transmission and/or clutch and maybe even an axle and/or possibly a few other related parts.

Okay, so we're not stupid, we've got the engine idling at say 600 RPM when we go through the above procedure. The principle, however, is the same, except in the latter case, at the instant we disengage the clutch, shaft 2 will be rotating at engine speed, 600 RPM, gear 6 will be rotating at a slightly greater speed, say 700 RPM (don't forget gear 5 is larger in diameter than gear 6) and gear 8 will be rotating slightly slower say 500 RPM (gear 7 being smaller than gear 8). We make our shift again and the same thing happens, only we don't have to accelerate the gears and shaft 2 quite so much because the whole rig is rotating in the first place. But the difference is in degree only and not in kind.

All right, so now somebody is going to ask how about the synchromesh? Well, that is a fair question but to avoid confusion at this point, we'll simply skip it for the time being. However, we will say that although the synchromesh action tends to overcome the above problems, it will not completely overcome them, and there are certain other considerations, also mentioned later, to be taken into account.

If we've digested the two special conditions outlined above, we can progress to a more practical case and one which will or at least should be considered practically every time we drive. That is, we'll now take a look at what happens when we shift down, say from fourth gear to third gear. In Fig. 1, the higher gear engagement will be when power is transmitted through gears 5 and 6 whereas the lower gear will be when gears 7 and 8 transmit the power. Let's assume we're again traveling at 30 m.p.h. so that shaft 1 is rotating at 1800 RPM and that we're driving along in high gear. Since gear 5 is of larger diameter than gear 6 and gear 6 is rotating with shaft 1 at 1800 RPM, our engine tachometer will be reading somewhat lower, say 1500 RPM, remembering that the tachometer reading is an indication of the speed of crankshaft 4 and consequently shaft 2. Now, since gear 7 is directly fixed to shaft 2, it is also rotating at a speed of 1500 RPM. But gear 8, being larger than gear 7, will be rotating still slower, say 1300 RPM. Therefore, as we drive along, gear 6 and shifting member 9 will be rotating at 1800 RPM whereas gear 8 will only

be rotating at 1300 RPM so that if we were to shift down to the lower gear, there would be approximately 1800 minus 1300 or 500 RPM difference in the rotation of shifting member 9 when it is engaged with gear 8. Actually, the difference will be even greater for as soon as clutch 3 is disengaged and shifting member 9 shifted out of engagement with gear 6 and into the neutral position, shaft 2 and all of the gears will not be connected to anything, and will immediately slow down.

Going back to the immediate problem it is obvious that if we can only force gear 8 to be turning at the same speed as shifting member 9 when the two are engaged, less wear and tear on the parts will occur. The question is how to do this, and this is where double clutching comes in. Remember, just before we disengaged our clutch to make the shift, shaft 2 was rotating at 1500 RPM and at this speed of shaft 2, gear 8 was rotating at 1300 RPM. But we want to rotate gear 8 at 1800 RPM so that it will be rotating at the same speed as member 9. Therefore, we must somehow speed up shaft 2 to some speed greater than 1500 RPM, say 2000 RPM in order to rotate gear 8 at exactly 1800 RPM. The only way we can do this is to take our foot off the clutch while the transmission is in neutral and speed up our engine to 2000 RPM. Shaft 2 will now be rotating at 2000 RPM. However, we don't want to shift into the lower gear while the clutch is engaged, so we quickly disengage our clutch again and before shaft 2 has a chance to slow down, quickly complete the shift from neutral, by engaging shifting member 9 with gear 8. Now there is no relative rotation between the engaging parts 8 and 9 and we don't have any wear and tear on our transmission parts. Now all we have to do to complete the perfectly smooth downshift is to make sure that when clutch 3 is re-engaged, crankshaft 4 is still turning at 2000 RPM, corresponding to the speed of shaft 2, so that the clutch parts will not have to slip relative to each other as the clutch is re-engaged.

For the reverse of the above procedure, that is, in shifting up, we can dispense with the double clutching because in this case, when shifting from the lower gear to the higher gear 6, the speed of shaft 2 after the shift is made will be lower than its speed before the shift is made, and this over-all slowing down of shaft 2 will occur naturally during the time clutch 3 is disengaged while our gearshift lever is progressing through the neutral position. And, the engine speed will also have slowed down due to the normal action of letting up on the accelerator while shifting. Any difference in speed between element 9 and gear 8 while shifting up will be very adequately taken care of by the synchromesh action.

This brings us back to the synchromesh. It is simply a frictional contact or clutching effect which is incorporated in shifting member 9 and the gears 6 and 8. In addition to the above-mentioned teeth on gears 6 and 8 and on shifting member 9 to effect a positive drive engagement between the parts, there are also smooth frictional contacting faces on these parts which come into contact with each other immediately before the teeth on these parts are engaged. This imparts a momentary frictional coupling between shifting member 9 and the gear with which it is being engaged so that any difference in rotational speed between the parts will tend to be overcome before the teeth actually engage. As a practical matter, it does not completely solve the problem, but so long as the frictional contacting surfaces are not worn to such an extent as to render them useless, their effect is considerable and permits us to be fairly sloppy in shifting without audible noise, that is, audible over the usual engine and road noise. So you say why bother with all of the above trash? Well, as we said, it's not worth it in shifting up, but when shifting down, particularly at high speeds, remember that the less work the synchromesh unit must perform, the longer it will last. Also, and more important, when

MIDWEST MEMBERS NOTE

Dottie Scharf, Potomac Region, is being transferred to the midwest. She has volunteered to try to contact members in Kansas, Missouri and Nebraska and help out in regional activities. She is one of Potomac Region's most lead-footed ladies, and usually cops the silver in the gals' division. And an awfully nice person. As of February, her address will be:

Captain Dorothy Scharf WAC
Station Complement (5021)
Fort Riley, Kansas

you double clutch on a downshift, you are not only getting shaft 2 up to proper speed, but you are also making sure that crankshaft 4 is at the proper speed so that when clutch 3 is reengaged at the end of the shift, not only the transmission parts but the crankshaft as well will be running at correct speed for a smooth operation all around, and the clutch will not have to take any undue abuse in accommodating for a difference in rotational speed between shafts 2 and 4. Besides, most of us like to be perfectionists.

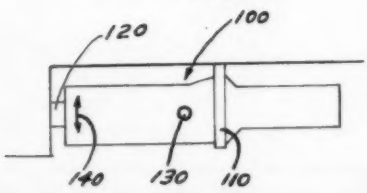
Primarily, failure to properly execute a shift, particularly a downshift, causes a lot of unnecessary wear and tear on the clutch plate, flywheel face and pressure plate. Under such circumstances you can expect an unusual amount of clutch wear and replacement of at least some parts of the clutch assembly will probably be necessary long before the end of the normal life expectancy of the clutch assembly.

Moreover, improper use of the clutch during shifting is very apt to "burn" the composition facing of the clutch disk, and this, in turn, often leads to loss of a smooth clutch action.

Probably in most cases a "burned" clutch disk by itself will not result in an objectionable or even a noticeable amount of "shudder" when the clutch is engaged, most noticeable when starting from a standstill, but if any one or a combination of other things is not up to snuff, the Porsche is apt to jerk and twitch like a worm in a bucket of hot ashes.

These "other things" cover a multitude of sins such as improper clutch cable guide adjustment, loose transmission and motor mounts, etc. Of these, the front transmission mounting is worth considering for a moment since at best, it's not the most red hot feature of the Porsche.

FIG. 2



Looking at Fig. 2, where your editor's artistic talent is again displayed, the rather grotesque blob 100 represents the engine, transmission and differential assemblies, the rear of the car being to the right. At approximately the point where the engine casing attaches to the transmission-differential casing, the unit is cradled, by means of rubber pads, in a U-shaped strap 110 hanging from the frame and at the extreme forward end of the transmission casing, the unit is supported by a rubber block 120 fixed on its forward face to the frame and on its rear face on the transmission casing.

This general construction is used in all models, except the 1600, see PANO. Vol. 1, Nos. 9 & 10.

The rubber block 120 can and frequently does cause a lot of trouble. Its exact construction is immaterial but the principle upon which it operates is to counteract torque reaction by placing the rubber block in shear.

The torque reaction occurs by virtue of the tendency of the engine-transmission-differential assembly 100 to rotate, with respect to the automobile chassis, about the centerline of the rear axles 130, causing up or down motion at the front of the transmission casing as indicated by the arrows 140.

This motion is normal, and occurs at any time torque is being applied to or by the rear wheels, as for example, during acceleration (upward movement of front of transmission), during braking (downward movement), or during engagement of the clutch when the engine is running either too slow or too fast for the road speed of the car.

FIG. 3

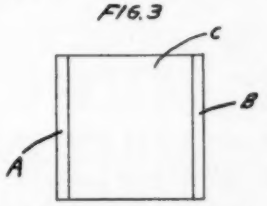


Fig. 3 illustrates the principle of the front transmission mounting. There are two metal plates A and B between which is sandwiched a rubber block C. The rubber block is bonded to both of the metal plates, and so long as this bond is maintained and the rubber block is intact, the mount will operate properly.

Metal plate A is attached to the chassis and metal plate B is attached to the front face of the transmission

casing so that the transmission is attached to the chassis through the rubber block C.

FIG. 4

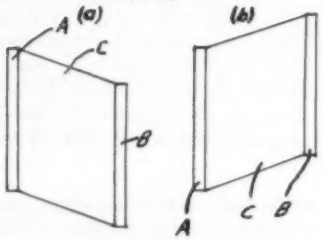


Fig. 4a shows the action of the mounting assembly under load, as for example when the brakes are applied, and Fig. 4b shows a reversal of the load, as for example during acceleration.

It can easily be appreciated that whenever the transmission mount is under load, the bond between the rubber block C and the two metal plates A and B will also be stressed, the severity of which will be directly proportional to the magnitude of the load and also to the rapidity with which the load is applied.

Failure of the mount usually begins with a partial separation of the bond between the rubber block and either or both metal plates. Once started, such separation is likely to increase quite rapidly.

A clutch action which is not smooth or which places a sudden strain on the clutch assembly, even though the strain may not be of unusual magnitude, can by virtue of the rapidity and frequency of occurence, fatigue the bond between the rubber block and metal plates much sooner than would occur in the absence of such loading.

Therefore, it is advisable, not only from the standpoint of prolonging the life of the transmission and of the clutch but also for the purpose of prolonging the life of the transmission front mounting to try at all times to operate the clutch and gearshift in the smoothest possible manner.

By way of practical demonstration, try this exercise:

Run along a straight and level stretch in third gear with the engine turning 2000 RPM or a little more. Put in the clutch, and simultaneously shift into neutral, while at the same time maintaining the accelerator at a position so that the engine will be turning about 3000 RPM. Now very quickly let the clutch out with the transmission in neutral and the engine at 3000 RPM, and then quickly put the clutch in and shift into second, still maintaining 3000 RPM on the tachometer and immediately release the clutch again. When you can do this rapidly enough so you are, in effect, manipulating the entire clutch sequence as a rapid pumping motion, try it at higher speeds and eventually between second and first. If executed properly, the car will not lurch or jerk at all, and in fact, you should be unable to detect the exact point at which the clutch re-engages to complete the shift.

Once the rhythm of this technique is learned, it becomes quite easy and in time will become habit. For those who may never have tried the system before, the most important thing to remember, after the proper rhythm of clutch and gearshift has been learned, is that the engine speed which you end up at is determined by the road speed of the car when the shift is completed and of course the particular gear you end up in at that road speed.

CLEANER AIR

Jim Gardner who lives out in Killeen, Texas, where it gets very dusty, has discovered that the VW oil bath air cleaners are a perfect fit for the Porsche 32 BP's. If you live in or plan to drive in dusty areas these VW cleaners will keep your engine somewhat cleaner than the standard cleaners and should be reasonably priced.

--Ray Pitts

Since some members have requested this information, the following table indicates the approximate amount by which the cylinder barrels must be shortened to attain the various compression ratios listed. If sufficient interest is displayed, a technical article will be prepared, giving details of this and other modifications.

1300 N	1300 A	1500 N
(79.9 mm bore)	(74.5 mm bore)	
6.5 - Std.	6.5 - Std.	7.5 - Std.
7.5 - .080"	7.5 - .090"	8.0 - .036"
		8.5 - .068"

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DOWN SHIFT

In line with the policy of broadening the geographical scope of Panorama, below are printed the first in what we hope will be a regular series of letters and comments from members in the various regions.

The following letter was written to your editor by Howard Miles, of Tacoma, Washington.

Dear Unshaven One;

First, you can believe Maria and I had a ball with all you folks back there, and though next year's Parade will be impossible for us to make, we'll be at the '58 meet with bells on. You see, I'm on Orders for the Far East and will be sailing early in February; Maria will be living down in California. The Porsche is on the block, and though it really hurts to have to sell the Lady, we just think of the 1600S convert we intend to bring back.

Howard "at ease" at Fremont, Neb.

That $2600.00 price tag on a 1600N Coupe is too good to miss. Just hope the Japanese market price doesn't soar about the time I'm set to buy! In any case, I hear there's a PCA member in Tokyo, so unless I land in Korea, there'll be some company. Just to keep everything legal I've arranged to invest in another Porsche to satisfy the requirement of the Club of being either an owner or co-owner. But I'm sure going to miss having one all my own!

Now, here's a member who's really interested, even to the extent of maintaining a part interest in a Porsche he will probably never drive just in order to satisfy the membership rules of PCA. Thanks for the very interesting letter, Howard, and for the pics, too.

Incidentally, Howard tells us they averaged approximately 33.8 mpg for the entire trip. Not too bad considering the amount of luggage, sleeping bags, etc. that went along for the ride.

TURNPIKE WEST

A friend and I drove from D.C. to Chicago for the Thanksgiving holidays in my 359A/1600. It was turnpike driving, from Breezewood interchange in Pennsylvania, to the Chicago city limits, a distance of 530 miles. Heavy rains across Ohio, and high winds in Indiana counteracted the advantage of the turnpike. The traffic was practically nil west of Akron in the early hours of Wednesday.

While in Chicago I had the Porsche serviced (9000 mile check-up) by the Hoffman Motor Car Co. I may be prejudiced since Chicago was my home, but "Zwerg" seemed to fly after the servicing she received.

The return trip was also delayed in Indiana by the tail of the storm that clobbered Erie. The best leg of the whole trip was from a gas stop in eastern Indiana to the first Esso station on the Pennsy Turnpike, which happens to be 20 miles west of Pittsburg (I had an Esso credit card, and nothing else). We were cruising right along at 3400 rpm and came out with a gas mileage in excess of 31.5. The turnpike driving was not monotonous as had been expected, thanks to rain, wind and snow. I drove all the way back in 12-1/2 hours plus a half hour stop for supper and didn't feel unduly fatigued. --John Christian

FUTURE EVENTS

The future events column will be devoted to competitive events scheduled in the various regions especially those participated in or sponsored by PCA'ers. To make this column effective however, we will need to be informed of any contests -- with their dates and, if possible, a short resume so they can be included in Panorama well in advance of the actual event.

EAST COAST--ROSE TREE RALLYE

In last year's rallye 88 cars were entered, and the Rose Tree people handled all details without a hitch. The course ran from Philadelphia up the Turnpike and from there into some interesting— and often snow covered — roads through the Poconos and back to Philadelphia for an excellent victory breakfast. The speeds chosen kept drivers from loafing, but were not impossible to maintain. In addition to time penalties there was an average speed per mile penalty that operated to keep lost cars from road racing to get back on time--it was more damaging penalty-wise to have failed to maintain proper speed than to be late at checkpoints--which seemed to us to be a very fine precautionary measure. No trick instructions were used, but the locations of the Pennsylvania county road signs were sometimes easy to overlook.

Last year, four cars from Potomac Region entered Rose Tree. Inexperience in rallying led three cars to grief--(all roads lead to Stroudsburg, and none to the second checkpoint)--but the fourth car (Beckett/Pitts) won silver. This year three Potomac Region PCA'ers will be entered, and we are hopeful of three more. How about seeing some members from other regions of PCA there? It's too good a rally to miss and certainly one of the best "big" rallyes on the East Coast.

1957 ROSE TREE RALLYE

Time: Sat , Jan. 19, 1957, 8:00 PM.

Price: $5 entry plus $1.50 per plate at breakfast.

Classes: Three.

Prizes: Sterling silver, one each to driver and navigator of first three cars in each class.

Place: Media, Pa. (Philadelphia area) Exact starting point not yet determined. For details and entry blank, write to

Rose Tree Motor Club, Inc.
P. O. Box 642
Media, Pennsylvania

EAST COAST--AUTORAMA

Bob Muelke, PCA, Associate Director of AUTORAMA, extends his personal invitation to any and all members to attend the 7th Annual National Autorama, at the State Armory in Hartford, Connecticut, February 20-24, 1957. Any members interested in entering cars in "Glamour on Wheels", Concour d'Elegance, contact Autorama Corporation, 2 Meadow Park Dr., Milford, Conn. Over an acre of display of antiques to super-poopers, with a big movie show thrown in. Anyone attending do not fail to drop by to say hello to Bob.

CONVERT!

Arthur F. Bartholomee (one of our newest Baltimore members) reported that after running Potomac Region's Color Rallye in a T-Bird, he has "since purchased a Blue Porsche 1600 Coupe; probably influenced by seeing all the Porsches in your Rallye". (A wise choice, we might add, since the Porsche is superlative in this field.)

CLARIFICATION

In PANO. Vol.1 No. 2, last paragraph in article HOW'S THE OIL PRESSURE, we have found that the adjusting screw for the green oil light was not clearly described. The adjusting screw is inside the end of the pressure switch which has the electrical wire attached to it. By removing the screw which holds the wire, you will see or feel the small adjusting screw about 1/2" inside the brass fitting. Most of the shop replacements we have heard of have been done unnecessarily and at excessive prices. In most cases the green light adjustment can be made with the adjusting screw. If a new switch is necessary, it should not cost over $1.00. (VW sells it for about that price.)

--Ray Pitts